

Date: Mon, 3 May 93 11:06:59 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #531  
To: Info-Hams

Info-Hams Digest                      Mon, 3 May 93                      Volume 93 : Issue 531

Today's Topics:

1MHz AM radio transmitter  
ARRL Bulletin 47 ARLB047  
ARRL Radio Buyer's Sourcebook  
Best antenna for use with ICOM R7100  
Comments on Dual Band HTs  
Mini 2m HTs  
no-code defense  
no-code defense (really: rec.radio netiquette)  
ORBS\$123.2liners  
Portable ATV Repeater ?  
re NiMH cells  
SAREX Update & QSL Info  
Sueing Jammers (Was: Re: "Busting" Jammers)  
UPS Problems

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: Mon, 3 May 1993 10:38:20 GMT  
From: psgrain!ee.und.ac.za!shrike.und.ac.za!pc-bdonal.ee.und.ac.za!  
bdonal@uunet.uu.net  
Subject: 1MHz AM radio transmitter  
To: info-hams@ucsd.edu

In article <1993Apr29.121949.5746@sunvax.sun.ac.za> 8910782@sunvax.sun.ac.za  
writes:  
>From: 8910782@sunvax.sun.ac.za

>Subject: 1MHz AM radio transmitter

>Date: 29 Apr 93 12:19:49 +0200

>Hi

>

>I would like to start a radio station at University. I am from South Africa,  
>and down here we don't have as much radio stations as in the USA for instance.  
>For example the entire AM band from 800kHz to 1.4MHz is available for  
>broadcast. I would therefore like to build a 1Mhz AM transmitter with a 2km  
>radius, so that I could reach the entire University.

Why on earth use AM. If you are planning on transmitting music FM is MUCH  
better, and many more people have FM recievers.

At present the chances of getting a transmitting licence are virtually zero.  
Our campus managed to get a temporary 2 week licence during RAG, but that  
was it.

If you are planning on transmitting without a licence don't bother, your  
station will be shut down within a few days (someone on our campus tried,  
and got a hefty >> R1000 fine.

>What I am looking for is a circuit which can accomplish this. Is there anybody  
>who can help me. Please be specific about the details of the circuit and don't  
>make it to complicated, because I am not that good with electronics and you  
>don't get strange components in South Africa. The best way for me would be to  
>receive a ORCAD.SCH file, or such like.

>

>Thanks a lot

>

>Francois

>

>Radio amateurs do it through the air.

```
Brian.      |-----|      |-----|      / \___/ \
              |/////| \      |/////| \      |   |   |
              |///| )///|      |///| |///|      |   *   *   |
              |/////|<      |///| |///|      -   /_\   -
              |///| )///|      |///|_|///|      -   /_\   -
              |/////| #      |/////| #      ---
```

Email: bdonal@daisy.ee.und.ac.za

Fax: Brian Donaldson (27) 31-8162111

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Date: 3 May 93 15:30:24 GMT

From: ogicse!uwm.edu!zaphod.mps.ohio-state.edu!mstar!n8emr!  
bulletin@network.UCSD.EDU

Subject: ARRL Bulletin 47 ARLB047

To: info-hams@ucsd.edu

```
=====
| Automatic relayed from packet radio via |
| N8EMR's Ham BBS, 614-895-2553 |
=====
```

ZCZC AG88  
QST de W1AW  
ARRL Bulletin 47 ARLB047  
>From ARRL Headquarters  
Newington CT April 28, 1993  
To all radio amateurs

SB QST ARL ARLB047  
ARLB047 30 meter petition denied

30 meter petition denied

The FCC has denied a petition to grant Novice and Morse code certified Technician class licensees access to a portion of the amateur 30 meter band. The petition, by William G. Welsh, W6DDB, asked that such licensees be allowed CW operation from 10.1 to 10.15 MHz.

Welsh argued that the 40, 15, and 10 meter bands currently occupied by Novices and Technicians are becoming less useful due to changing sunspot conditions and interference from shortwave broadcast stations. He also said that the longer antennas needed for operation on 80 meters limited the appeal of that band for Novices and Technicians.

The FCC said that in opening the 30 meter band to the Amateur Service in 1985 it had not included Novices and Technicians in order to promote an acceptable balance between licensing incentives and operating privileges. It followed the same guideline in the opening of the 17 meter band in 1989, the FCC said.

Thus, this petition for rule making was repetitive, the FCC said.  
NNNN

-----  
Date: 3 May 93 14:26:29 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!  
darwin.sura.net!sgiblab!news.cs.indiana.edu!bsu-cs!news.nd.edu!  
hesmac16@network.UCSD.EDU  
Subject: ARRL Radio Buyer's Sourcebook

To: info-hams@ucsd.edu

I spoke to someone in the publications department at ARRL this morning, who told me that "Radio Buyer's Sourcebook II" will be released at the end of May.

Will this be a revised and updated version of the 1991 edition, like the forthcoming "Now You're Talking II," or will it be a supplementary volume, covering different models?

I know that several ARRL employees monitor this newsgroup, and I am hoping that one of them will be able to discover the answer to my question!

TNX de N9SQE

-----  
Date: 3 May 1993 12:13:29 -0400  
From: digex.com!digex.net!not-for-mail@uunet.uu.net  
Subject: Best antenna for use with ICOM R7100  
To: info-hams@ucsd.edu

O.K., I've finally dropped the bucks on an ICOM R7100. Can anyone suggest an antenna that would be optimum for the R7100's freq coverage.

Someone at work mentioned a R.S. Discone, but I know a person who had one and didnt like it. Any Suggestions?

Thanks:

Please respond via mail to : archer@access.digex.com

-----  
Date: 3 May 93 16:55:32 GMT  
From: ogicse!uwm.edu!wupost!csus.edu!netcom.com!kors@network.UCSD.EDU  
Subject: Comments on Dual Band HTs  
To: info-hams@ucsd.edu

Anthony S. Pelliccio (system@garlic.sbs.com) wrote:  
: Lawrence\_Chen@lhaven.UUmh.Ab.Ca (Lawrence Chen) writes:

: > Right now I'm looking at the various ICOM offerings (24AT, W21AT, W2A), the  
: > FT530 & FT470 from Yeasu, the Alinco DJ580T, and the Kenwood TH78Ao

I've had a FT470 for the last two years and haven't found a thing that I wanted to do with it that I couldn't do. Recently, I've learned how to expand the the

receiver range to 500mc which permits me to listen to the local fire and police chatter. Its not perfect, but as good as any I've come in contact with.

Dick  
km6ep.

-----  
Date: 3 May 93 05:29:30 GMT  
From: ogicse!hp-cv!sdd.hp.com!portal!lhaven.UUmh.Ab.Ca!dreamer@network.UCSD.EDU  
Subject: Mini 2m HTs  
To: info-hams@ucsd.edu

I'm about to write my test, and I'd like to get comments from the net on full-featured 5W Mini 2m HTs.

I want to get something with everything under the sun that doesn't feel like I'm lugging around the kitchen sink.

I'll summarize to the net if I get sufficient responses.

I'm also still interested in hearing to full-featured Dual Band (2m/70cm) HTs.

And, running Packet through these HTs with an Amiga or an HP48sx 8-)

"Just a Crazy Engineer with an Amiga and an HP48sx" - The Dreamer  
Email: dreamer@lhaven.uumh.ab.ca or "Lawrence Chen" @ 1:134/3002  
PHONE: +1 403 526 6019 FAX: +1 403 529 5102 CIS: 74200,2431  
Lunatic Haven BBS (1:134/3002): +1 403 526 6957 (14,400 HST/v.32bis)  
Lunatic Haven BBS (UUCP): +1 403 526 5035 (Telebit Worldblazer)  
Praxis Society K12 BBS (1:134/3003): +1 403 529 1610 (Telebit T2500SA)

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Date: 3 May 93 12:53:22 GMT  
From: usc!zaphod.mps.ohio-state.edu!moe.ksu.ksu.edu!cis.ksu.edu!  
mac@network.UCSD.EDU  
Subject: no-code defense  
To: info-hams@ucsd.edu

jherman@uhunix.uhcc.Hawaii.Edu (Jeff Herman) writes:

.....  
>I'm NH6IL and I'm against the no-code license.

I'm W0PBV and I was and still am against the no-code license. However, now that no-code is a fait accompli, I don't waste any time fighting it.

My spouse and one of my three (all grown) "children" are coded techs.

On the other hand, over half of "my" ARES/RACES group are no-coders.  
(I use whoever volunteers!)

Regardless of the pro's and con's for using the code itself,  
it did provide one commonality for all hams.

And it was/is easier to build a useful rig for CW.  
(But who cares--almost no one builds ANYTHING these days!)

However, with the "dumbing down" of America, who can fight "progress"?

Flames to /dev/null.

--Myron.

--

# We preserve our freedoms using four boxes: soap, ballot, jury, and cartridge.  
# Myron A. Calhoun, PhD EE; Assoc. Professor (913) 539-4448 home  
# INTERNET: mac@cis.ksu.edu (129.130.10.5) 532-6350 work, 532-7353 fax  
# UUCP: ...rutgers!depot!mac Packet-BBS: W0PBV @ K0VAY.#NEKS.KS.USA.NAOM

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Date: Mon, 3 May 93 16:45:17 GMT  
From: agate!headwall.Stanford.EDU!nntp.Stanford.EDU!umunhum!paulf@ames.arpa  
Subject: no-code defense (really: rec.radio netiquette)  
To: info-hams@ucsd.edu

The consensus that seems to have built up over the years is that flamage is  
somewhat unwelcome in rec.radio.amateur.misc, but considered part of the job  
in rec.radio.amateur.policy. Likewise, this topic (the seminannual code  
confligation) doesn't belong here, either.

--

--Paul Flaherty, N9FZX | "Just name a hero, and I'll prove he's a bum."  
->paulf@Stanford.EDU | -- Col. Gregory "Pappy" Boyington, USMC (ret)

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Date: 3 May 93 15:40:12 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: ORBS\$123.2liners  
To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-123.N  
2Line Orbital Elements 123.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT

FROM N3FKV HEWITT, TX May 3, 1993  
BID: \$ORBS-123.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:

1 AAAAAU 00 0 0 BBBB.BBBBBBBB .CCCCCCC 00000-0 00000-0 0 DDDZ  
2 AAAAA EEE.EEEE FFF.FFFF GGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ  
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN  
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

A0-10

1 14129U 83 58 B 93118.11475914 -.00000100 00000-0 99999-4 0 9873  
2 14129 27.0715 28.2681 6014912 76.8439 340.0570 2.05881517 74230

U0-11

1 14781U 84 21 B 93120.07285750 .00000409 00000-0 73773-4 0 4129  
2 14781 97.8161 148.5957 0011978 145.4224 214.7778 14.68965367489655

RS-10/11

1 18129U 87 54 A 93119.88948533 .00000087 00000-0 89554-4 0 6061  
2 18129 82.9210 274.3052 0013130 89.4383 270.8250 13.72315376293221

A0-13

1 19216U 88 51 B 93116.50909762 -.00000095 00000-0 99999-4 0 5988  
2 19216 57.7760 319.9836 7246452 313.7135 5.4992 2.09722646 37271

F0-20

1 20480U 90 13 C 93116.63542355 .00000015 00000-0 63811-4 0 4444  
2 20480 99.0491 342.5753 0540850 203.3160 154.2545 12.83219140150704

A0-21

1 21087U 91 6 A 93122.91637860 .00000084 00000-0 82656-4 0 7510  
2 21087 82.9389 86.3295 0035366 145.4995 214.8446 13.74516646113223

RS-12/13

1 21089U 91 7 A 93123.04532099 .00000053 00000-0 50149-4 0 4005  
2 21089 82.9220 315.5980 0029141 167.4565 192.7323 13.74020894112321

U0-14

1 20437U 90 5 B 93120.69632955 .00000135 00000-0 60336-4 0 7449  
2 20437 98.6165 205.4991 0010981 326.7198 33.3295 14.29765020170647

A0-16

1 20439U 90 5 D 93115.24007829 .00000149 00000-0 65640-4 0 5527  
2 20439 98.6221 200.9358 0011321 342.8328 17.2466 14.29823811169879

D0-17

1 20440U 90 5 E 93114.18496752 .00000163 00000-0 70866-4 0 5542  
2 20440 98.6243 200.0920 0011524 344.7427 15.3410 14.29958526169732

W0-18

1 20441U 90 5 F 93120.24134421 .00000137 00000-0 61048-4 0 5575  
2 20441 98.6228 206.1135 0012110 327.6481 32.3954 14.29941112170606

L0-19

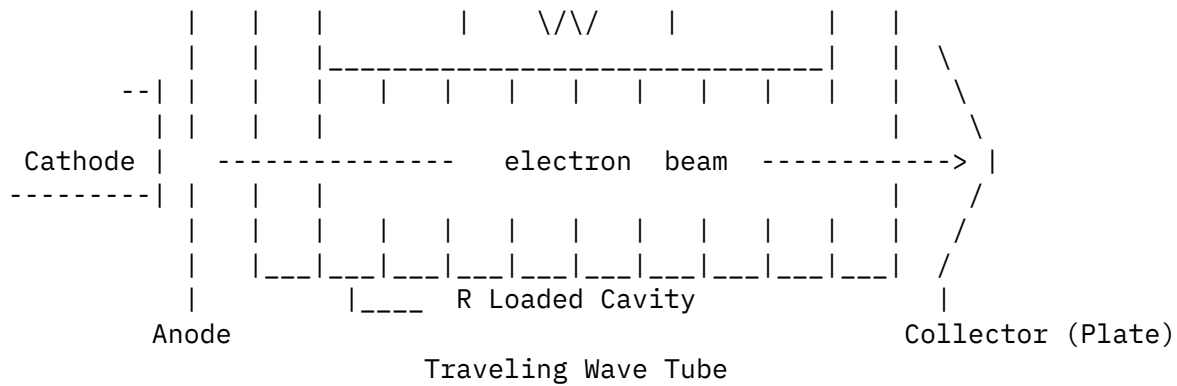
1 20442U 90 5 G 93122.76508103 .00000112 00000-0 51109-4 0 5544  
2 20442 98.6234 208.7808 0012097 319.8820 40.1473 14.30030380170974

U0-22

1	21575U	91 50	B	93119.22007906	.000000163	000000-0	62211-4 0	2522
2	21575	98.4760	196.1122	0008332	85.2439	274.9701	14.36816290	93636
K0-23								
1	22077U	92 52	B	93070.30867943	.000000000	000000-0	99999-4 0	940
2	22077	66.0779	169.1155	0009657	210.7767	149.2671	12.86276851	27252
K0-23								
1	22077U	92 52	B	93070.30867943	.000000000	000000-0	99999-4 0	940
2	22077	66.0779	169.1155	0009657	210.7767	149.2671	12.86276851	27252
NOAA-9								
1	15427U	84123	A	93119.80292635	.000000120	000000-0	74224-4 0	3614
2	15427	99.1055	159.1387	0014450	307.4746	52.5098	14.13507864431948	
NOAA-10								
1	16969U	86 73	A	93120.03569592	.000000110	000000-0	55144-4 0	2009
2	16969	98.5189	136.4721	0014293	94.6812	265.5994	14.24795340343779	
MET-2/17								
1	18820U	88 5	A	93120.78702652	.000000084	000000-0	69210-4 0	8670
2	18820	82.5393	236.6031	0015417	261.8387	98.1024	13.84681175265286	
MET-3/2								
1	19336U	88 64	A	93109.46504936	.000000043	000000-0	99999-4 0	365
2	19336	82.5357	263.4940	0015950	242.7419	117.2079	13.16957512227481	
NOAA-11								
1	19531U	88 89	A	93119.94305688	.000000219	000000-0	13824-3 0	1050
2	19531	99.1273	94.7929	0011075	212.0763	147.9719	14.12867596236869	
MET-2/18								
1	19851U	89 18	A	93121.38915933	.000000059	000000-0	47659-4 0	8029
2	19851	82.5206	112.2394	0014105	309.5219	50.4694	13.84331385210719	
MET-3/3								
1	20305U	89 86	A	93119.68670595	.000000043	000000-0	99999-4 0	7095
2	20305	82.5602	199.0916	0014343	231.0542	128.9304	13.16018803168724	
MET-2/19								
1	20670U	90 57	A	93122.14419746	.000000064	000000-0	51753-4 0	5541
2	20670	82.5476	174.9529	0014457	218.5932	141.4197	13.84172946143759	
FY-1/2								
1	20788U	90 81	A	93116.99355304	.000000262	000000-0	19644-3 0	5534
2	20788	98.8722	144.7704	0015563	85.2344	275.0616	14.01319614135417	
MET-2/20								
1	20826U	90 86	A	93119.50743902	.000000068	000000-0	56294-4 0	5590
2	20826	82.5264	115.1276	0013555	120.8929	239.3566	13.83545504130556	
MET-3/4								
1	21232U	91 30	A	93122.98812765	.000000043	000000-0	99999-4 0	3581
2	21232	82.5444	99.7051	0017265	139.3595	220.8817	13.16821823	97375
NOAA-12								
1	21263U	91 32	A	93120.04795299	.000000253	000000-0	13122-3 0	5605
2	21263	98.6611	150.9885	0013151	358.5541	1.5603	14.22247181101802	
MET-3/5								
1	21655U	91 56	A	93111.06268628	.000000043	000000-0	99999-4 0	4141
2	21655	82.5514	54.8561	0012815	167.4626	192.6807	13.16818653	80906
MIR								







Date: 3 May 93 13:39:31 GMT  
 From: news-mail-gateway@ucsd.edu  
 Subject: re NiMH cells  
 To: info-hams@ucsd.edu

There have been several recent references to "NiMH cells." Since when does the National Institute of Mental Health advocate the use of such devices? Or is there perhaps another explanation?

TKS es 73.

Mike Karp (KC1JP)                      We're all Golgafringians under the skin...  
 Flying Fish Software  
 mjkarpp@gnu.ai.mit.edu

Date: 3 May 93 14:54:05 GMT  
 From: news-mail-gateway@ucsd.edu  
 Subject: SAREX Update & QSL Info  
 To: info-hams@ucsd.edu

SB SAREX @ AMSAT \$STS-55.018  
 SAREX Mission Update & QSL Info

May 3, 1993 13:00 UTC

The power conservation effort on the Space Shuttle Columbia, discussed in the last SAREX bulletin, was quite successful. Yesterday, NASA announced that the STS-55 mission has been extended for one full day. Landing is now set for May 6 (Thursday) at 13:03 UTC.

As a result of this extension day, the Shuttle Amateur Radio Experiment (SAREX) working group has gotten permission to extend operations until May 5 at 20:50 UTC.

Nearly all the school contacts have been completed at this point, so it can be assumed that general voice and packet QSO operation will pick up over the next few days; however, there is NO GUARANTEE that this will be the case. Several stations have reported making packet connects to STS-55 over the past few days.

Since the shuttle is still in a power conservation mode, the astronauts will use battery power during voice contacts. In addition, since the computer is not currently being utilized for packet operations to save power, stations on the ground are encouraged to download all SAREX packet telemetry to disk and forward this information to the Working Group so the SAREX team can have a compiled log of the stations who were heard by the shuttle. Please send any packet downlink data you have obtained for this mission to:

STS-55 Packet Logs  
c/o Frank Bauer, KA3HDO  
1804 Hopefield Rd  
Silver Spring, MD 20905

Please use a PC-compatible disk (3.5 inch preferred) and store the data in an ASCII format. The SAREX team will then compile this information into a database, similar to the service provided by Tom Clark, W3IWI, for the STS-35 mission. If there is a group interested in compiling this data, please contact me at my home address (above) or on E-Mail: ka3hdo@amsat.org

#### QSLs

As with all SAREX flights, a special QSL card is planned for this mission. If you make a 2-way contact with the crew or hear the SAREX downlink, you qualify for a QSL card.

The IBM Amateur Radio Club of Boca Raton, Florida has volunteered to act as the QSL manager for the STS-55 SAREX mission. For the STS-55 mission, please send your QSLs to:

IBM Amateur Radio Club/1993  
PO Box 1328  
Boca Raton, FL 33429-1328

On the outside of the envelope, please write STS-55 SWL or STS-55 QSL--2-Way depending on whether you heard the

downlink or made a two-way contact.

For all QSLs, it is essential that you include an Self-Addressed, Stamped Envelope (SASE) using a large (4 inch x 9.5 inch) envelope. If an SASE or sufficient IRCs are not included with your signal report you will not receive a QSL card.

Submitted by Frank H. Bauer, KA3HDO for the SAREX Working Group

/EX

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Date: Mon, 3 May 1993 13:57:40 GMT  
From: news.acns.nwu.edu!casbah.acns.nwu.edu!lapin@network.UCSD.EDU  
Subject: Sueing Jammers (Was: Re: "Busting" Jammers)  
To: info-hams@ucsd.edu

In article <C6B8sx.Cps@srgenprp.sr.hp.com> alanb@sr.hp.com (Alan Bloom) writes:  
>Rev. Michael P. Deignan (kd1hz@anomaly.sbs.com) wrote:

>  
>: With all the discussion about getting the FCC and ARRL to take action against  
>: jammers, has anyone ever considered hitting jammers where it hurts most  
>: yourself - in their pocket book?  
>  
>: For instance, what would it take to sue someone who you can "prove" was  
>: jamming the repeater? What "evidence" would be necessary to "prove" your  
>: case in a civil court (since it is a preponderance of evidence and not  
>: beyond-a-reasonable-doubt)?  
>  
>I think the problem is that even if you prove that he was causing  
>malicious interference, you would collect little or no money. To be  
>awarded a judgement, you have to show a financial injury. Not being  
>able to talk on your favorite repeater wouldn't likely get you much  
>of an award.  
>  
>AL N1AL "Not a lawyer"  
>

Hey, this is America! All you have to do is lift up a rock, pull out one of the slimy creatures that lives there (WEAR GLOVES!), and go to court. No evidence needed. No money needed. It only costs you a percentage of your award but it costs the other guy plenty to defend himself.

Of course, he could turn around and do the same thing to you.

Is something wrong here?

Greg KD9AZ

-----  
Date: Mon, 3 May 1993 14:20:34 GMT  
From: amdcad!amdcl2!brian@decwrl.dec.com  
Subject: UPS Problems  
To: info-hams@ucsd.edu

Pete Rossi writes:

> UPS does not seem to follow  
> delivery instructions very well. I had something sent to me COD once and  
> when I got home from work there was the package sitting on my doorstep.  
>  
> THE UPS GUY JUST LEFT IT THERE!! Without collecting anything!!

I, too, have had problems with UPS -- the last incident was with an insured package the was clearly marked (with a UPS sticker) "adult signature required." It was left on my front doorstep and was visible from the street. I was glad it was insured.

In the long run, we can't tell UPS how to run their business -- it might be cheaper for them to spend 30 seconds less per delivery and pay \$1000 every once in a while for a lost package.

[Note the followup line -- let's try to keep this out of "swap" space.]

Brian McMinnn N5PSS brian.mcminnn@amd.com

-----  
Date: Mon, 3 May 1993 10:28:00 GMT  
From: agate!howland.reston.ans.net!darwin.sura.net!ukma!news1.gsfc.nasa.gov!nssdca.gsfc.nasa.gov!stocker@ames.arpa  
To: info-hams@ucsd.edu

References <1993Apr29.075411.9186@nnnnpd2.cxo.dec.com>,  
<1993May1.182621.11042@rock.concert.net>,  
<1993May1.231515.24935@mnemosyne.cs.du.edu>%  
Subject : Re: no-code defense

>This is a different audience from the airwaves. There are times when it is  
>necessary to convey extremely strong feelings, and, since facial expressions  
>and tone of voice are lost over this medium, something else must be  
>substituted. The rest of the net does not care about such things; I fail to

>understand why the ham radio groups should be different from, say,  
>comp.os.os2.misc (aside from the obvious difference in subject matter).  
>  
>--  
>Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can  
>jmaynard@oac.hsc.uth.tmc.edu | adequately be explained by stupidity.  
>"If OS/2 is dead, then there are an awful lot of vocal ghosts calling us on  
> the phone." -- Katy Ansardi of Indelible Blue (an OS/2 exclusively store)

This is just an excuse! To assume that in a language that contains 500,000 words the only way to express strong feeling is by using foul language is the height of ignorance. The use of four letter words has proliferated because people are incapable of any substantial use of vocabulary or any real expression of feeling. When one descends into the gutter, one generally stays there (and not just to express strong feeling).

It is absurd in the highest degree to assume that it is OK to swear on a network just because it isn't over the air. This type of language is inappropriate regardless of where it is done. Perhaps a little stint in a dictionary would overcome the need to use 4 letter words.

Erich

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End of Info-Hams Digest V93 #531

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